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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/656,110

Applicant(s)

HA, HO-JIN

Examiner

Joni Hsu

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed December 4, 2007 are considered but are not persuasive.
2. As per Claim 1, Applicant argues Matsuzaki (US 20030145336A1) doesn't teach speaker 305 is external storage and control part outputs user data to external storage apparatus (p. 5-6).

In reply, Examiner points out Lyle (US7035290B1) is used to teach user data is output to external apparatus such as portable MP3 player (c. 13, ll. 53-c. 14, ll. 16; c. 14, ll. 43-c. 15, ll. 6). Even though Lyle does not expressly teach external apparatus is external storage apparatus, it would be obvious to one of ordinary skill in the art that portable MP3 player contains storage device in order to store received data in order for portable MP3 player to use received data.

3. Applicant argues Matsuzaki doesn't teach control part causes video data to be displayed, outputs user data to external apparatus. Control unit 302 outputs video data to display, control unit 304 outputs audio data to speakers 305. Speakers 305 are not external apparatus (p. 6).

In reply, Hirota (US006865431B1) is used to teach this limitation, as discussed below.

4. Applicant argues Fallon (US006601104B1) doesn't teach display memory 1110 or output memory 1130 temporarily store both video and user data that were input from hard disk (p. 6).

In reply, Fallon is merely used to teach video memory (1130, Fig. 11) temporarily stores video data (c. 15, ll. 46-58). Hirota is used to teach memory (3, Fig. 52) temporarily stores user data stored in hard disk (31; c. 56, ll. 10-13; c. 42, ll. 46-56). So, combination of Fallon and Hirota teaches video memory temporarily stores video data and user data stored in hard disk.

5. Applicant argues Hirota does not discuss user data is output to external apparatus (p. 6).

In reply, Lyle is used to teach this (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll. 16).

6. Applicant argues in Hirota, video can either be displayed at LCD 5 or, separately, playlist can be displayed at LCD 5. Hirota does not suggest both video data can be displayed and playlist can be output to apparatus. If video data is displayed in Hirota, then playlist is not able to be displayed. As there is no distinction between display part and external apparatus, it is unclear as to how incorporating Hirota into systems of Matsuzaki and Fallon would be suggestive of display apparatus that include control part that is able to both display video data to display part and also output user data to external apparatus connected to external apparatus connecting part of display apparatus. LCD 5 is not storage apparatus (p. 7).

In reply, claims do not expressly recite video data is displayed at same time user data is output to apparatus. So, even though Hirota teaches video can either be displayed or, separately, user data is displayed, Hirota still teaches control part to display video to display part and to output user data to apparatus, so still reads on this claim limitation as it written. Lyle is used to teach outputting user data to external apparatus (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll. 16).

7. Applicant argues Lyle does not discuss control part of display apparatus that outputs user data to external apparatus that is connected to external apparatus connecting part of display apparatus. Lyle discusses only that apparatus can receive data. Lyle does not discuss receiving user data from control part of display apparatus that is capable of both displaying video data to display part and outputting user data to external apparatus (p.7).

In reply, Examiner disagrees. Lyle teaches user data is output to external apparatus (receiver 15) (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll. 16), and also teaches receiver 15 can be TV set (c. 14, ll. 50-52), and so Lyle teaches control part to display video data received to display part and to output user data to external apparatus.

8. Applicant argues motivation cited of receiving user data in order for user to be able to use user data to control programs does not suggest why one of ordinary skill in the art would have been led to combine the teachings of Matsuzaki, Fallon, Hirota and Lyle, specifically to teach control part of display apparatus to display video data and to output user data to external apparatus connected to display apparatus. Neither Matsuzaki, Fallon, Hirota or Lyle suggest control part of display apparatus can both display video data and output user data to external apparatus. Hirota only discusses user data from flash memory card is capable of being displayed on LCD 5. There is no indication from Hirota or motivation cited as to why both video data and user data would be transmitted to a single device. If playlist in Hirota is displayed on LCD 5, then video data cannot be displayed. If video data is displayed in Hirota on LCD 5, then user data cannot also be output to external storage apparatus (p. 7-8).

In reply, Examiner points out claims do not explicitly recite video data is displayed at same time user data is output to apparatus. So, even though Hirota teaches video can either be displayed or, separately, user data is displayed, Hirota still teaches displaying video to display part and outputting user data to apparatus, and so still reads on this claim limitation as it written.

9. Applicant argues none of references suggests one control part is able to both transmit video data for display and transmit user data to device. Motivation cited of receiving user data in order for user to be able to use user data to control programs suggests only that user data would be saved to external apparatus, but not why user data would be saved to external apparatus and, from same control part, display video data to display part. Motivations cited do not suggest why one of ordinary skill in the art would cause both video data and user data, which are both temporarily stored in memory, to be transmitted to display apparatus, and then cause control part

of display apparatus to both display video data and output user data to external apparatus.

Merely showing audio data, distinct from video data, would be played through speakers does not suggest why user data would be transmitted along with video data so user data could be output to external storage apparatus that is connected to display apparatus (p. 8).

In reply, Hirota teaches playlist displayed on LCD and video data displayed on LCD, as admitted by Applicant. As discussed above, this teaching still reads on this claim limitation as it written.

10. As per Claim 5, Applicant argues the references do not teach that the display apparatus has a buffer temporarily storing the user data received through the data receiving part (p. 8-9).

In reply, Examiner disagrees. Lyle teaches this (c. 15, ll. 1-6; c. 13, ll. 66-c. 14, ll. 16).

11. As per Claim 3, Applicant argues references don't teach TMDS transmitter has RGB data output pins, compresses user data and video data provided from video memory in predetermined ratio to output compressed user and video data through respective RGB data output pins (p. 9).

In reply, Examiner disagrees. Matsuzaki teaches TMDS transmitter (213, Fig. 3) has RGB data output pins, and compresses video data provided from memory in predetermined ratio to output compressed video data through respective RGB data output pins [0012, 0038, 0043, 0044, 0037]. Fallon teaches video data is provided from video memory (c. 15, ll. 46-58). Fandrianto teaches compressing user and video data (c. 3, ll. 50-52) and outputting compressed user and video data through respective RGB data output pins (c. 23, ll. 35-60). So, combination of Matsuzaki, Fallon, and Fandrianto teaches this limitation.

12. As per Claim 10, Applicant argues references don't teach compressing user and video data according to TMDS-based digital transmission standard, before transmitting data from computer to display (p. 10).

In reply, Examiner disagrees. Matsuzaki teaches this [0058, 0087, 0038, 0018].

13. As per Claim 11, Applicant argues references don't teach extracting data; separating extracted data into video data and user data (p. 10).

In reply, the Examiner disagrees. Johnson teaches this limitation (c. 7, ll. 18-27).

14. As per Claim 15, Applicant argues Hirota discusses only that playlist from flash memory card 31 is able to be displayed on LCD 5, but not that LCD is able to transmit same user data that has been transmitted from flash memory card or hard disk back to flash memory card (p. 11).

In reply, Hirota teaches user manipulates data that is displayed on LCD 5 using user interface unit 2 (c. 41, ll. 32-64; c. 42, ll. 29-30), and so LCD and user interface unit are considered to be part of display unit. User interface unit transmits user data to flash memory card 31 (c. 41, ll. 32-64; c. 42, ll. 29-30; c. 9, ll. 61-65). Since user interface unit is considered to be part of display unit, this means display unit transmits user data to flash memory card 31.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1) in view of Fallon (US006601104B1), further in view of Hirota (US006865431B1), further in view of Lyle (US007035290B1).

18. As per Claim 1, Matsuzaki teaches computer system having computer body (20), having hard disk to store user data [0035], video connector (201) to transmit data, video processing part (202) to generate video data [0044], data transmitting part (213, Fig. 3) to output video data through video connector [0037]; display apparatus, having display part (303), body connection part (301) to connect to video connector of computer body, external apparatus connecting part to connect to external apparatus (305) [0036], data receiving part (311, Fig. 3) to receive video data provided from computer body through body connection part [0037, 0073], control part (302, 304, Fig. 2) to display video data received through data receiving part to display part and to output data to external apparatus connected to external apparatus connecting part [0036, 0108-0114].

But, Matsuzaki doesn't teach video memory to temporarily store video data generated through video processor, data transmitting part outputs video data temporarily stored in video memory. But,



Fallon teaches video memory 1130 to temporarily store video data generated through video processing part 1120, outputting video data temporarily stored in video memory to display (c. 15, ll. 46-58).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki to include video memory to temporarily store video data generated through video processing part, data transmitting part outputs video data temporarily stored in video memory because Fallon suggests advantage of higher data transfer rates through intermediate data buffering in random access memory (c. 2, ll. 32-33; c. 15, ll. 28-34, 46-58).

But, Matsuzaki, Fallon don't teach video memory temporarily stores user data stored in hard disk, data transmitting part outputs user data temporarily stored in video memory, data receiving part receives user data provided from computer body. But, Hirota teaches memory (3, Fig. 52) temporarily stores user data stored in hard disk (31; *embodiment describes flash memory card, though the invention can be applied to other media including a hard disk*, c. 56, ll. 10-13; c. 42, ll. 46-56), user data temporarily stored in memory (3) is output to display apparatus (5) (c. 41, ll. 32-63; c. 37, ll. 22-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki and Fallon so video memory also temporarily stores user data stored in hard disk, data transmitting part also outputs user data temporarily stored in video memory, and data receiving part also receives user data provided from computer body as suggested by Hirota. Hirota suggests user data originally stored in hard disk needs to be transmitted to display apparatus so user is able view user data so user is able to make modifications to user data as user desires (c. 41, ll. 32-63). Memory for temporary storage, such as RAM, has advantage of being able to be accessed at high speed, and so it is advantageous for user data to be transferred from hard disk to this memory so user data can be accessed at high speed (c. 37, ll. 22-28; c. 41, ll. 32-63; c. 56, ll. 10-13; c. 42, ll. 46-56).

However, Matsuzaki, Fallon, and Hirota do not teach user data is output to external storage apparatus. However, Lyle teaches data transmitting part (113, Fig. 6) and data receiving part 115 to output and receive video and user data (c. 13, ll. 53-c. 14, ll. 16), user data is output to external apparatus (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll. 16). User data is output to external apparatus such as portable MP3 player (c. 13, ll. 53-c. 14, ll. 16; c. 14, ll. 43-c. 15, ll. 6). Even though Lyle does not expressly teach external apparatus is external storage apparatus, it would be obvious to one of ordinary skill in the art that portable MP3 player contains storage device in order to store received data in order for portable MP3 player to use received data. User data is output to external apparatus (receiver 15) (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll. 16), and receiver 15 can be TV set (c. 14, ll. 50-52), and so Lyle teaches control part to display video data received to display part and to output user data to external apparatus.

It would have been obvious to one of ordinary skill in the art at time of invention by applicant to modify Matsuzaki, Fallon, Hirota so user data is output to external storage apparatus because Lyle teaches external apparatuses (MP3 players, information kiosks) need to receive user data in order for user to be able to use user data to control programs (c. 14, ll. 1-16, 48-52).

19. As per Claim 2, Matsuzaki teaches data transmitting part (213, Fig. 3) and data receiving part (311) respectively comprises TMDS (Transition Minimized Differential Signals) transmitter and TMDS receiver to compress/extract data according to TMDS-based digital data transmission standard [0058, 0087, 0038, 0018].

20. As per Claim 5, Matsuzaki does not teach display apparatus has buffer temporarily storing user data received through data receiving part. However, Lyle teaches this limitation (c. 15, ll. 1-6; c. 13, ll. 66-c. 14, ll. 16).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki so display has buffer temporarily storing user data received through data receiving part because Lyle teaches user downloaded data needs to be stored in order for external apparatuses such as MP3 players and information kiosks to receive user data in order for user to be able to use user data to control programs (c. 14, ll. 1-16, 48-52; c. 15, ll. 1-6).

21. As per Claim 6, Matsuzaki does not teach external apparatus connecting part outputs digital signal from data transmitting part to external apparatus via buffer. However, Lyle teaches this (c. 15, ll. 1-6; c. 13, ll. 66-c. 14, ll. 16). This would be obvious for reasons for Claim 5.

22. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Fandrianto (US005982459A).

Matsuzaki, Fallon, Hirota, and Lyle are relied on for teachings for Claim 2. Matsuzaki teaches TMDS transmitter (213, Fig. 3) has RGB data output pins, and compresses video data provided from memory in predetermined ratio to output compressed video data through respective RGB data output pins [0012, 0038, 0043, 0044, 0037]. Fallon teaches video data is provided from video memory (c. 15, ll. 46-58), as discussed for Claim 1.

However, Matsuzaki and Fallon do not teach user data is compressed and output. However, Fandrianto teaches compressing user and video data (c. 3, ll. 50-52) and outputting compressed user and video data through respective RGB data output pins (c. 23; ll. 35-60).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki, Fallon, Hirota, and Lyle so user data is also compressed and

output because Fandrianto suggests the advantage of compressing all of the data (c. 3, ll. 50-52), which decreases total size of data that needs to be transferred, so increasing the transfer speed.

23. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Johnson (US006593972B1).

Matsuzaki, Fallon, Hirota, and Lyle are relied on for teachings for Claim 2.

However, Matsuzaki, Fallon, Hirota, and Lyle do not teach control part has signal separating part to separate digital data extracted in data receiver into video data and user data. However, Johnson teaches this limitation (c. 7, ll. 18-27).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki, Fallon, Hirota, and Lyle so control part has signal separating part to separate digital data from receiver into video and user data because Johnson suggests advantage of being able to send video data to video player device, and user data to user control box, so correct data is sent to correct devices (c. 7, ll. 18-34; c. 3, ll. 51-58).

24. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Charton (US005621792A).

Matsuzaki, Fallon, Hirota, and Lyle are relied on for teachings for Claim 1.

However, Matsuzaki, Fallon, Hirota, and Lyle do not teach computer body has parallel-serial converting part to convert user data to serial data, wherein user data is parallel data. However, Charton teaches this limitation (c. 4, ll. 34-43).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki, Fallon, Hirota, and Lyle so computer body has parallel-serial converting part to convert user data to serial data, wherein user data is parallel data because Charton suggests transmitting user data in serialized format enables optimal picture access mode (c. 4, ll. 34-43; c. 2, ll. 5-13; c. 18, ll. 52-56).

25. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Charton (US005621792A), further in view of Kato (US006939177B2).

Matsuzaki, Fallon, Hirota, and Lyle are relied on for teachings for Claim 2. Hirota teaches outputting user data stored in hard disk to display apparatus, as discussed for Claim 1.

But, Matsuzaki, Fallon, Hirota, and Lyle do not teach computer body has parallel-serial converting part to convert user data to serial data, parallel-serial converting part outputs converted serial data. But, Charton teaches this (c. 4, ll. 34-43). This would be obvious for reasons for Claim 7.

However, Matsuzaki, Fallon, Hirota, Lyle, and Charton do not teach serial data output to display apparatus through predetermined pin of video connector. However, Kato teaches this (c. 1, ll. 27-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki, Fallon, Hirota, Lyle, and Charton so serial data is output to display apparatus through predetermined pin of video connector because Kato suggests data needs to be connected to the right type of pin in order to be transmitted properly (c. 1, ll. 27-38).

26. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1) in view of Lyle (US007035290B1), further in view of Hirota (US006865431B1).

27. As per Claim 9, Matsuzaki teaches data transmitting method of computer system including computer body (20, Fig. 2) having hard disk to store user data [0035], video processing part (202) to generate video data, and video connector (201) through which generated video data is outputted [0044]; and display apparatus having body connection part (301) to be connected to video connector, comprising providing external apparatus connect part in display apparatus [0036]; transmitting data to display apparatus through video connector [0037, 0073]; and displaying video data of transmitted data as picture and outputting data of transmitted data to an external apparatus (305) connected to the external apparatus connecting part [0036, 0108-0114].

However, Matsuzaki does not teach outputting the user data of the transmitted data to the external storage apparatus connected to the external apparatus connecting part. However, Lyle teaches this (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 53-c. 14, ll. 16). This would be obvious for reasons for Claim 1.

However, Matsuzaki and Lyle do not teach that user data stored on the hard disk is transmitted to the display apparatus. However, Hirota teaches this, as discussed for Claim 1.

28. As per Claim 10, it is similar to Claim 2, and so is rejected under same rationale.

29. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Lyle (US007035290B1), and Hirota (US00685431B1) in view of Johnson (US006593972B1).

Claim 11 is similar in scope to Claim 4, and so is rejected under same rationale.

30. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Lyle (US007035290B1), and Hirota (US00685431B1) in view of Charton (US005621792A), further in view of Kato (US006939177B2).

Matsuzaki, Lyle, and Hirota are relied upon for teachings discussed relative to Claim 9.

However, Matsuzaki, Lyle, and Hirota do not teach converting the user data to serial data. However, Charton discloses this, as discussed in the rejection for Claim 7.

But, Matsuzaki, Lyle, Hirota, and Charton do not teach setting up predetermined pin of video connector as data transmission pin; transmitting of data comprises outputting serial data to display apparatus through data transmission pin. But, Kato teaches setting up predetermined pin of video connector as data transmission pin; and user data is serial data, wherein transmitting of data comprises outputting serial data to display apparatus through data transmission pin (c. 1, ll. 27-38). This would be obvious for reasons given in rejection for Claim 8.

31. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Lyle (US007035290B1), and Hirota (US00685431B1) in view of Charton (US005621792A).

Matsuzaki, Lyle, and Hirota are relied upon for the teachings relative to Claim 9.

But, Matsuzaki, Lyle, and Hirota do not teach converting user data to serial data, data transmitted is serial data. But, Charton teaches converting user data to serial data, data that is transmitted is video data and serial data (c. 4, ll. 34-43; c. 5, ll. 41-45). This would be obvious for reasons for Claim 7.

32. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1) in view of Hirota (US00685431B1).

Matsuzaki teaches computer system, having processing unit (20, Fig. 2); having video processor (202) to generate video data [0035, 0044], storage unit to store user data [0035], and data transmitter (213, Fig. 3) to transmit video data [0076]; and display unit (30, Fig. 2), which is connected to processing unit via a video connector (201) to display the video data [0045-0048].

However, Matsuzaki does not teach external storage unit to store user data; and display unit is connected to external storage unit via external storage unit connector, to transmit user data to external storage unit. However, Hirota teaches storage unit (3, Fig. 52) to store user data (c. 42, ll. 46-56); external storage unit (31) to store user data (c. 9, ll. 46-65). User data is displayed on LCD (5), and user manipulates this data using user interface unit (2) (c. 41, ll. 32-64; c. 42, ll. 29-30), and so LCD and user interface unit are considered to be part of display unit. Display unit is connected to processing unit (10), and is connected to external storage unit (31) via external storage unit connector (1) (c. 42, ll. 27-42), to display data (c. 41, ll. 32-64) and to transmit user data to external storage unit (31) (c. 9, ll. 61-65). User manipulates data that is displayed on LCD 5 using user interface unit 2 (c. 41, ll. 32-64; c. 42, ll. 29-30), and so LCD and user interface unit are considered to be part of display unit. User interface unit transmits user data to flash memory card 31 (c. 41, ll. 32-64; c. 42, ll. 29-30; c. 9, ll. 61-65). Since user interface unit is considered to be part of display unit, this means display unit transmits user data to flash memory card 31.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki to include external storage to store user data; display is connected to external storage unit via external storage unit connector, to transmit user data to external



storage unit as taught by Hirota. Hirota teaches using external storage unit to store user data is advantageous because it is portable and user data can easily be used by different users (c. 1, ll. 25-47). It is advantageous to be able to connect external storage unit to display unit so user can view user data and manipulate user data on external storage unit (c. 41, ll. 32-64; c. 9, ll. 61-65).

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Shortened statutory period for reply to final action is set to expire THREE MONTHS from mailing date of action. In event first reply is filed within TWO MONTHS of mailing date of final action and advisory action is not mailed until after end of THREE-MONTH shortened statutory period, then shortened statutory period will expire on date advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from mailing date of advisory action. In no event, however, will statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JH



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